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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/594,667	09/28/2006	Simon J Case	36-2026	2308

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EXAMINER	
ADAMS, CHARLES D	
ART UNIT	PAPER NUMBER
2164	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/594,667	CASE ET AL.	
	Examiner	Art Unit	
	CHARLES D. ADAMS	2164	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 September 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-6* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-6* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *5-1-07*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Remarks

1. In response to communications filed on 28 September 2006, claims 4-5 are amended, claim 7 is cancelled. Claims 1-6 are pending in the application.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 5 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "insufficiently specific" in claim 5 is a relative term which renders the claim indefinite. The term "insufficiently specific" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. Claim 6 is rejected under 35 U.S.C. 101 because the claims lack the necessary physical articles or objects to constitute a machine or a manufacture within the meaning of 35 USC 101. Though an apparatus is claimed, no hardware exists in the claimed subject matter. As such, the claims are not directed towards a machine or a manufacture. They are clearly not a series of steps or acts to be a process nor are they a combination of chemical compounds to be a composition of matter. As such, they fail to fall within a statutory category. They are, at best, functional descriptive material *per se*.

Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." Both types of "descriptive material" are nonstatutory when claimed as descriptive material *per se*, 33 F.3d at 1360, 31 USPQ2d at 1759. When functional descriptive material is recorded on some computer-readable medium, it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lawry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994).

Merely claiming nonfunctional descriptive material, i.e., abstract ideas, stored on a computer-readable medium, in a computer, or on an electromagnetic carrier signal, does not make is statutory. See *Diehr*, 450 U.S. at 185-186, 209 USPQ at 8 (noting that the claims for an algorithm in *Benson* were unpatentable as abstract ideas because "[t]he sole practical application of the algorithm was in connection with the programming of a general purpose computer.").

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Mena et al. ("Observer: An Approach for Query Processing in Global Information Systems based on Interoperation across Pre-existing Ontologies").

As to claim 1, Mena et al. teaches:

(i) receiving a user query (see page 16, "Query Processor");

(ii) comparing portions of the user query with phrases in a set of predefined phrases to find one or more matching phrases (see page 16, "Query Processor". Queries are translated);

(iii) identifying, using predefined relationships between said predefined phrases and predefined concepts in an ontology, one or more concepts relevant to said portions of the received user query (see page 16, section 2.2, steps 1-5); and

(iv) identifying, using predefined relationships between predefined actions and said predefined concepts, one or more actions relevant to the received user query, wherein an action comprises providing access to an information resource (see page 16, section 2.2, steps 1-5).

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mena et al. ("Observer: An Approach for Query Processing in Global Information Systems based on Interoperation across Pre-existing Ontologies") in view of Jakobsson et al. (US Pre-Grant Publication 2004/0225639).

As to claim 2, Mena et al. teaches wherein said predefined concepts comprise task concepts and non-task concepts (see page 16, section 2.1, "Ontology Server", and page 21, section 3.3. Ontology servers provide access to underlying data (non-task concepts, as they are not involved in the task of translating and determining relevant ontologies for a user query) and concepts and mappings to underlying data (task concepts))

Mena et al. does not teach wherein the ontology defines, for each task concept, an indication of the number of non-task concepts required to implement a corresponding task.

Jakobsson et al. teaches wherein the ontology defines, for each task concept, an indication of the number of non-task concepts required to implement a corresponding task (see paragraphs [0115]-[0117]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Mena et al. by the teachings of Jakobsson et al., since Jakobsson et al. teaches that " Partitioning a table can increase the efficiency of processing queries" and "For example, if a particular query selects all rows where date is greater than May 31, 1996, then only the partitions associated with the months June 1996 and beyond need be scanned" (see paragraph [0117]).

10. Claims 3 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mena et al. ("Observer: An Approach for Query Processing in Global Information Systems based on Interoperation across Pre-existing Ontologies") in view of Takagi et al. ("Realization of Sound-scape Agent by the Fusion of Conceptual Fuzzy Sets and Ontology").

As to claim 3, Mena et al. teaches a method according to claim 1.

Mena et al. does not teach wherein said relationships between said predefined phrases and said predefined concepts in the ontology are fuzzy relationships each represented by a respective fuzzy support value.

Takagi et al. teaches wherein said relationships between said predefined phrases and said predefined concepts in the ontology are fuzzy relationships each represented by a respective fuzzy support value (see section 2.3).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Mena et al. by the teachings of Takagi et al., since Takagi et al. teaches that "a search for information referring to a region of the CFS derived from keywords activates information retrieval that satisfies the user's actual intention, whereas an ordinary search with superficial keywords may have problems. The information retrieved shows the same degree of relevance as the words in the CFS" (see section 2.4).

As to claim 6, Mena et al. teaches:

an input for receiving a user query (see page 16, section 2.1);

an ontological database for storing an ontology defining relationships between a plurality of predefined concepts (see page 16, section 2.1);

a context phrase database for storing predefined context phrases and, for each context phrase (see page 16, section 2.1),

Mena et al. does not teach:

information defining a fuzzy relationship with an associated concept stored in the ontology;

Takagi et al. teaches:

information defining a fuzzy relationship with an associated concept stored in the ontology (see section 2.3);

Mena et al. as modified teaches:

a concept mapper for comparing portions of a received user query with context phrases stored in the context phrase database to thereby identify and output one or more relevant concepts (see page 16, section 2.1); and

an action selector operable to identify an action in respect of one or more relevant concepts output by the concept mapper, wherein an action comprises providing access to an information resource in response to the received user query (see page 16, section 2.1, and section 2.2, steps 1-5).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Mena et al. by the teachings of Takagi et al., since Takagi et al. teaches that "a search for information referring to a region of the CFS derived from keywords activates information retrieval that satisfies the user's actual intention, whereas an ordinary search with superficial keywords may have problems. The information retrieved shows the same degree of relevance as the words in the CFS" (see section 2.4).

11. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mena et al. ("Observer: An Approach for Query Processing in Global Information Systems based on Interoperation across Pre-existing Ontologies") in view of Goedken (US Pre-Grant Publication 2002/0133494).

As to claim 4, Mena et al. teaches a method according to claim 1.

Mena et al. does not teach:

(v) in the event that a relevant task concept is not identified at step (iii), using a default task concept at step (iv) to identify a relevant action.

Goedken teaches (v) in the event that a relevant task concept is not identified at step (iii), using a default task concept at step (iv) to identify a relevant action (see paragraph [0109]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Mena et al. by the teachings of Goedken, since Goedken teaches "methods and apparatus for facilitating information exchange between an information requestor and one or more information custodians via a network are provided. The Information requester creates an information request message and sends it to the apparatus. The apparatus then determines an appropriate information custodian based on predetermined categories and other information" (see Abstract).

12. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Mena et al. ("Observer: An Approach for Query Processing in Global Information Systems based on Interoperation across Pre-existing Ontologies") in view of Boys (see US Pre-Grant Publication 2003/0126210).

As to claim 5, Mena et al. teaches a method according to claim 1.

Mena et al. does not teach:

(vi) in the event that said one or more concepts identified at step (iii) are insufficiently specific to enable a relevant action to be identified at step (iv), identifying from the ontology one or more further concepts related to those identified at step (iii) and requesting input from the user to select one or more of said further concepts for use in step (iv) to identify a relevant action

Boys teaches

(vi) in the event that said one or more concepts identified at step (iii) are insufficiently specific to enable a relevant action to be identified at step (iv), identifying from the ontology one or more further concepts related to those identified at step (iii) and requesting input from the user to select one or more of said further concepts for use in step (iv) to identify a relevant action (see paragraph [0048])

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified Mena et al. by the teaching of Boys, since Boys teaches "as part of a search option, a button labeled Category allows a lecturer to choose form a database filled with broadly defined lecture categories to narrow subject mater during a WEB search for pages generally falling within the category" (see paragraph [0048]).

Conclusion

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHARLES D. ADAMS whose telephone number is (571)272-3938. The examiner can normally be reached on 8:30 AM - 5:00 PM, M - F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles Rones can be reached on (571) 272-4085. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/C. D. A./
Examiner, Art Unit 2164

/Charles Rones/
Supervisory Patent Examiner, Art Unit 2164